AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently amended) A computer-implemented diagram system comprising:

a diagram that stores at least one shape element in accordance with object role modeling; ~~and,~~

an object model application program interface that includes a control that facilitates access to the diagram, the control maintaining state information associated with the diagram; and

a computer readable storage medium comprising sets of code and data structures for causing a computer to modify the diagram with the object model application program interface.

2. (Currently amended) The computer-implemented system of claim 1, the state information comprising at least one of selection, zoom and scroll position.

3. (Currently amended) The computer-implemented system of claim 1, the control captures operating system events.

4. (Currently amended) The computer-implemented system of claim 3, the control providing at least some of the operating system events to the shape element.

5. (Currently amended) The computer-implemented system of claim 1, the control rerouting at least one of paint, keyboard and mouse events to at least one of the diagram and the shape element.

6. (Currently amended) The computer-implemented system of claim 1, the diagram and the shape element responsible for painting themselves.

7. (Currently amended) The computer-implemented system of claim 1, the diagram ~~and/or~~ or the shape element being responsible for responding to a user interaction.

8. (Currently amended) The computer-implemented system of claim 1, the shape element being based, at least in part, upon a model element class.

9. (Currently amended) The computer-implemented system of claim 1, the diagram being based, at least in part, upon a node shape that has a bounds property which defines its location and size, the node shape derived from the shape element.

10. (Currently amended) The computer-implemented system of claim 1, at least one shape element having a child shape element.

11. (Currently amended) The computer-implemented system of claim 1, the shape element derived from a presentation element.

12. (Currently amended) The computer-implemented system of claim 1, the shape element comprising at least one of a geometry property, a style set property and a shape fields property.

13. (Currently amended) The computer-implemented system of claim 1, the diagram having a graph object employed for hittesting for testing a shape that has been user dropped by dragging.

14. (Currently amended) The computer-implemented system of claim 1, the shape element being control-less.

15. (Currently amended) A computer-implemented method that facilitates access to a diagram comprising:

employing a control to access [a] an object model diagram; and,

storing at least one shape element contained by the diagram in accordance with object role modeling.

16. (Currently amended) The computer-implemented method of claim 15, the control maintaining state information associated with the diagram.

17. (Original) A computer readable medium having stored thereon computer executable instructions for carrying out the method of claim 15.

18. (Canceled).

19. (Currently amended) A computer readable medium storing computer executable components of a diagram system comprising:

a diagram component that stores at least one shape element in accordance with object role modeling; and,

an object model application program interface component that includes a control that facilitates access to the diagram, the control maintaining state information associated with the diagram.

20. (Currently amended) A computer-implemented diagram system comprising:

means for storing at least one shape element in a diagram in accordance with object role modeling, the diagram and/or the shape element being responsible for painting themselves and responding to a user interaction;

means for accessing the diagram; and,

means for maintaining state information associated with the diagram.

21. (New) A computer implemented method for diagramming, comprising:

managing presentation elements comprised of diagrams and shapes in a same context as correspondingly depicted design elements of a diagram on design surface in an object model diagramming system to avoid synchronization issues of mirrored presentation and design classes;

providing an object model application programming interface comprising a single diagram control for the design surface that maintains state information associated with the diagram by capturing events; and

rendering shapes of the diagram that are responsible for painting themselves and for responding to user interaction via a user interface.